

MAIL STOP PCT

Attorney Docket: 26443U

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: Examiner: Unknown  
GMEINER, et al. Group Art Unit: Unknown  
International Application Number: PCT/EP2003/007060  
Serial Number: 10/519,487  
International Filing Date: 02 July 2003 (02.07.2003)  
Filed: December 30, 2004  
Title: **UTILIZAITON OF HETEROARENE CARBOXAMIDE AS DOPAMINE-D3  
LIGANDS FOR THE TREATMENT OF CNS DISEASES**

**TRANSMITTAL LETTER**

Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith for filing in the U.S. Patent and Trademark Office is the following:

- (1) Transmittal Letter;
- (2) Information Disclosure Statement;
- (3) PTO Form 1449 with Thirty-eight (38) cited References;
- (4) Copies of Thirty-two (32) cited References.

The Commissioner is hereby authorized to charge any deficiency or credit any excess to Deposit Account Number 14-0112.

Respectfully submitted,

**NATH & ASSOCIATES PLLC**

Date: March 29, 2005

By: 

**NATH & ASSOCIATES PLLC**  
1030 15<sup>th</sup> Street, N.W., 6<sup>th</sup> Floor  
Washington, D.C. 20005-1503  
(202) 775-8383

Gary M. Nath  
Registration Number 26,965  
Tanya E. Harkins  
Registration Number 52,993  
Customer Number 20529

GMN/TEH/le

MAIL STOP PCT

Attorney Docket: 264430

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: Examiner: Unknown  
 GMEINER, et al. Group Art Unit: Unknown  
 International Application Number: PCT/EP2003/007060  
 Serial Number: 10/519,487  
 International Filing Date: 02 July 2003 (02.07.2003)  
 Filed: December 30, 2004  
 Title: **UTILIZAITON OF HETEROARENE CARBOXAMIDE AS DOPAMINE-D3  
 LIGANDS FOR THE TREATMENT OF CNS DISEASES**

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, VA 22313-1450

Sir:

An Information Disclosure Statement is submitted herewith pursuant to 37 C.F.R. 1.97-1.98. Please note the following particulars:

[NOTE: One only of items a, b, c, and d must be checked.]

[XXX] a. The enclosed statement is being filed within three months of the filing date of a national application, or within three months of the date of entry into the national stage as set forth in 37 C.F.R. 1.491 in an international application, or before the mailing date of a first Office Action on the merits, whichever event occurs last.

[ ] b. The enclosed statement is being filed after a first action on the merits but before the mailing date of a final action under 37 C.F.R. 1.113, or a notice of allowance under 37 C.F.R. 1.311.

The enclosed statement is accompanied by [check one]:

- [ ] i. a certification in part (e) below as specified in 37 C.F.R. 1.97(e), or
- [ ] ii. a check in the amount required by 37 C.F.R. 1.17(p).

[ ] c. The enclosed statement is being filed after the mailing date of a final action under 37 C.F.R. 1.113, or a

notice of allowance under 37 C.F.R. 1.311, but before payment of the issue fee.

- ☐ Certification report(e) below; and
- ☐ a check in the amount as required by 1.17(p).

☐ d. The enclosed statement is being filed pursuant to 37 C.F.R. 1.97(i), for placement in the file.

☐ e. Certification [Check one] [Certification is required only if box (b)(i) or box (c) is checked.]

☐ I hereby certify that each item of information contained in the enclosed Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement,

or

☐ I hereby certify that no item of information in the enclosed Information Disclosure Statement herewith was cited in a communication from a foreign patent office in a counterpart foreign application, or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

or

☐ Appropriate certification is attached.

[XXX] f. If no check is enclosed and a fee is due in connection with this communication or if the check enclosed is insufficient, the Commissioner is authorized to charge any fee or additional fee due in connection with this communication to Deposit Account No. 14-0112.

[XXX] g. Copies of the documents are attached herewith with a completed Form PTO-1449.

or

☐ Copies of the documents are not attached as allowed under CFR 1.98(d)(1)(2). The earlier application is identified as:

or

[XXX] Copies of US Patents/Publications not attached as allowed in Official Gazette Aug. 5, 2003/ Vol. 1273, no. 1.

The Examiner is respectfully requested to cite the documents listed on the attached Form PTO-1449 in the next Office Action. In so doing, the Examiner is respectfully requested to initial in the space adjacent to the listing of each document on the Form PTO-1449, and return a copy of the initialed Form PTO-1449 with the next communication to Applicants, to confirm that these documents have been considered by the Examiner and made of record in this application.

If the Examiner has any questions or wishes to discuss this application, kindly telephone the undersigned at the below-listed number.

Respectfully submitted,

**NATH & ASSOCIATES PLLC**

Date: March 29, 2005

By: 

**NATH & ASSOCIATES PLLC**  
1030 15<sup>th</sup> Street, N.W., 6<sup>th</sup> Floor  
Washington, D.C. 20005-1503  
(202) 775-8383

Gary M. Nath  
Registration Number 26,965  
Tanya E. Harkins  
Registration Number 52,993  
Customer Number 20529

GMN/TEH/le

FORM PTO-1449  <b>INFORMATION DISCLOSURE CITATION</b>	Attorney Docket: 26443U	Serial Number: 10/519,487
	Inventor: GMEINER, et al.	Filing Date: December 30, 2004
	Group Art Unit: Unknown	Internal Application Number: PCT/EP2003/007060
		International Filing Date: 02 July 2003

U.S. PATENT DOCUMENTS						
Exam Init.	Document Number	Issue Date	Name	Class	Sub-Class	Filing Date
/NR	6,090,807 A (corresponds to WO 96/02246)	18 Jul. 2000	Hellendahl, et al.			14 Jul. 1995
/NR	A1					
/NR	A2	5,872,119 A	16 Feb. 1999	Wermuth, et al.		10 Dec. 1996
/NR	A3	5,464,632 C1	20 Feb. 2001	Cousin, et al.		29 Nov. 1994
/NR	A4	3,734,915	22 May 1973	Wright Jr., et al.		15 Oct. 1971
/NR	A5	5,985,895 A	16 Nov. 1999	Wermuth, et al.		26 Jun. 1998
/NR	A6	3,646,047	29 Feb. 1972	Wright Jr., et al.		02 Feb. 1970

FOREIGN PATENT DOCUMENTS						
Exam Init.	Document Number	Date	Country	Class	Sub-Class	Translation
/NR	A7	97/38989 A1	23 Oct. 1997	WO		N/A
/NR	A8	96/02246 A1	01 Feb. 1996	WO		Abstract
/NR	A9	96/02249 A1	01 Feb. 1996	WO		Abstract
/NR	A10	97/34889 A1	25 Sep. 1997	WO		N/A
/NR	A11	93/21179 A1	28 Oct. 1993	WO		N/A
/NR	A12	01/72306 A1	04 Oct. 2001	WO		Abstract
/NR	A13	00/27357-A1	18 May 2000	WO		Abstract
/NR	A14	93/01805 A1	04 Feb. 1993	WO		Abstract
/NR	A15	2 027 898 A6	16 Jun. 1992	ES		Abstract
/NR	A16	0 779 284 A1	18 Jun. 1997	EP		Abstract
/NR	A17	03/028728 A1	10 Apr. 2003	WO		N/A
/NR	A18	0 343 961 B1	10 Jan. 1996	EP		N/A
/NR	A19	0 496 692 A1	29 Jul. 1992	EP		N/A
/NR	A20	0 548 356 B1	30 Jun. 1993	EP		Abstract
/NR	A21	00/27357 A1	18 May 2000	WO		Abstract

OTHER (including Author, Title, Date, Pertinent Pages, etc.)						
/NR	A22	Murray, P.J., et al., "A Novel Series of Arylpiperazines with High Affinity and Selectivity for the Dopamine D <sub>3</sub> Receptor", <i>Bioorg. Med. Chem. Lett.</i> , Vol. 5, Pp. 219-222, (1995).				
/NR	A23	Bridges, A.J., et al., "Fluorine as an ortho-Directing Group in Aromatic Metalation: A Two Step Preparation of Substituted Benzo[b]thiophene-2-carboxylates", <i>Tetrahedron Letters</i> , Vol. 33, No. 49, Pp. 7499-7502, (1992).				
/NR	A24	Dann, O., et al., "Synthese antileukämischer Indolylvinyl-1-benzofurane und benzo[b]thiophene", <i>Liebigs Ann. Chem.</i> , Pp. 438-455, (1986). (Abstract)				
/NR	A25	Kienhöfer, A., "1-Hydroxy-7-azabenzotriazole (HOAt) and N-[(dimethylamino)-1H-1,2,3-triazolo-[4,5-b]pyridin-1-yl-methyl-ene]-N-methylmethanaminium hexafluorophosphate N-oxide (HATU)", <i>Synlett</i> , No. 11, Pp. 1811-1812, (2001).				
/NR	A26	Glennon, R.A., et al., "Arylpiperazine Derivatives as High-Affinity 5-HT <sub>1A</sub> Serotonin Ligands", <i>J. Med. Chem.</i> , Vol. 31, Pp. 1968-1971, (1988).				
/NR	A27	Löber, S., et al., "Fused Azaindole Derivatives: Molecular Design, Synthesis and In Vitro Pharmacology Leading to the Preferential Dopamine D <sub>3</sub> Receptor Agonist FAUC 725", <i>Bioorganic &amp; Medicinal Chemistry Letters</i> , Vol. 12, Pp. 2377-2380, (2002).				
/NR	A28	Asghari, V., et al., "Modulation of Intracellular Cyclic AMP Levels by Different Human Dopamine D <sub>4</sub> Receptor Variants", <i>J. Neurochem.</i> , Vol. 65, Pp. 1157-1165, (1995).				
/NR	A29	Sokoloff, P., et al., "Pharmacology of human dopamine D <sub>2</sub> receptor expressed in a mammalian cell line: comparison with D <sub>2</sub> receptor", <i>European Journal of Pharmacology - Molecular Pharmacology Section</i> , Vol. 225, Pp. 331-337, (1992).				
/NR	A30	Hayes, G., et al., "Structural Subtypes of the Dopamine D <sub>2</sub> Receptor are Functionally Distinct: Expression of the Cloned D <sub>2L</sub> and D <sub>2S</sub> Subtypes in a Heterologous Cell Line", <i>Molecular Endocrinology</i> , Vol. 6, Pp. 920-926, (1992).				
/NR	A31	Hübner, H., et al., "Cyanoindole Derivatives as Highly Selective Dopamine D <sub>3</sub> Receptor Partial Agonists: Solid-Phase Synthesis, Binding Assays, and Functional Experiments", <i>J. Med. Chem.</i> , Vol. 43, Pp. 4563-4569, (2000).				
/NR	A32	Hübner, H., et al., "Conjugated Enynes as Nonaromatic Catechol Bioisosteres: Synthesis, Binding Experiments, and Computational Studies of Novel Dopamine Receptor Agonists Recognizing Preferentially the D <sub>3</sub> Subtype" <i>J. Med. Chem.</i> Vol. 43, Pp. 756-762, (2000).				
/NR	A33	Pilla, M., et al., "Selective inhibition of cocaine-seeking behaviour by a partial dopamine D <sub>3</sub> receptor agonist", <i>Nature</i> , Vol. 400, Pp. 371-375, (1999).				

FORM PTO-1449		Attorney Docket: 26443U	Serial Number: 10/519,487
INFORMATION DISCLOSURE CITATION		Inventor: GMEINER, et al.	Filing Date: December 30, 2004
		Group Art Unit: Unknown	International Application Number: PCT/EP2003/007060
			International Filing Date: 02 July 2003

  

/NR/	A34	Perrone, R., et al., "N-[2-[4-(4-Chlorophenyl)piperazin-1-yl]ethyl]-3-methoxybenzamide: A Potent and Selective Dopamine D <sub>3</sub> Ligand", <i>J. Med. Chem.</i> , Vol. 41, Pp. 4903-4909, (1998).
/NR/	A35	Robarge, M.J., et al., "Design and Synthesis of [(2,3-Dichlorophenyl)piperazin-1-yl]alkylfluorenylcarboxamides as Novel Ligands Selective for the Dopamine D <sub>3</sub> Receptor Subtype", <i>J. Med. Chem.</i> , Vol. 44, Pp. 3175-3186, (2001).
/NR/	A36	Pulvirenti, L., et al., "Being partial to psychostimulant addiction therapy" <i>TIPS</i> , Vol. 23, No. 4, Pp. 151-153, (2002).
/NR/	A37	Leopoldo, M., et al., "Structure-Affinity Relationship Study on N-[4-(4-Arylpiperazin-1-yl)butyl]arylcarboxamides as Potent and Selective Dopamine D <sub>3</sub> Receptor Ligands", <i>J. Med. Chem.</i> , Vol. 45, Pp. 5727-5735, (2002).
/NR/	A38	Bettinetti, L., et al., "Interactive SAR Studies: Rational Discovery of Super-Potent and Highly Selective Dopamine D <sub>3</sub> Receptor Antagonists and Partial Agonists", <i>J. Med. Chem.</i> , Vol. 45, Pp. 4594-4597, (2002).

  

Examiner	/Niloofer Rahmani/	Date Considered	02/11/2008
----------	--------------------	-----------------	------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP ' 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.